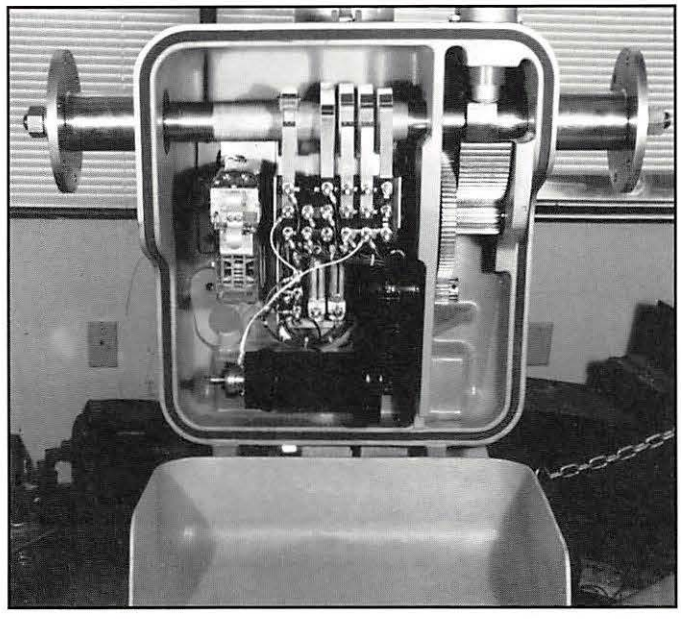
UNION SWITCH & SIGNAL

HIGHWAY GRADE Crossing Hardware



Union Switch & Signal offers a complete line of highway grade crossing hardware, designed in response to customer requests for lighter weight and increased dependability and backed by a company with more than 100 years of experience as a supplier of rail industry systems and components.

The new US&S line of grade crossing hardware offers substantial improvements in economy and maintenance ease, while maintaining the reliability that characterizes products from Union Switch.

US&S highway grade crossing hardware meets applicable industry standards and applicable standards of the American Association of Railroads and American Association of State Highway Officials.

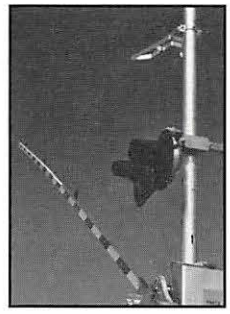
In addition, like all US&S components, highway grade crossing hardware is subjected to the strenuous quality control standards that earned US&S registration to ISO 9001, the international community's most prestigious and rigorous measure of quality processes.

GATE MECHANISM

The Model 95 Gate Mechanism is a completely new and redesigned gate mechanism that meets or exceeds all AAR and other industry specifications. It features an integral cast aluminum housing and cover and is driven by a highly efficient gear motor. This results in a highly serviceable unit that is stronger and more durable than current models, but is considerably smaller and more than one-third lighter. It has a stall torque of 2,000 foot-pounds instead of the 1,300 foot-pounds for gate mechanism designs that preceded it. Other features of the Model 95 include heavy duty coil springs for vertical and horizontal dampeners; availability with vital or non-vital relay; capability of indefinite motor stall; and higher-strength gears. The Model 95 is designed for ease of installation and ease of maintenance, with convenient access to the gear train.

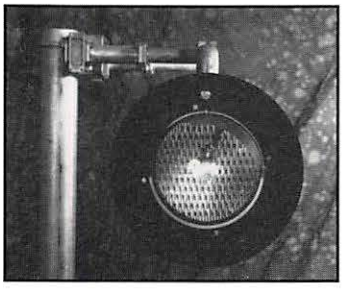
During testing, the gear motor prototypes performed to expectations through more than 200,000 operations and are still functioning. At an average of 10 trains a day, that translates to more than 55 years of operation.

GATE ARMS

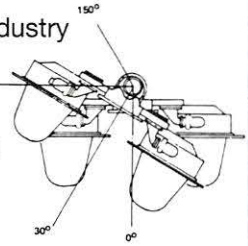


Gate arms are available in adjustable lengths from 17 feet to 40 feet in either aluminum or fiberglass. Each gate arm has one fixed aluminum section and two aluminum or fiberglass telescoping sections. The gate arms are linked to the support assembly by a shear pin that allows breakaway to prevent damage to the mechanism in case the arm is struck. Red and white diagonal striping is available in various grades, and each arm section has a weather-proof four-inch or seven-inch light that is visible in either direction. The wiring harness and each light are connected with plugs for easy replacement.

12-INCH LIGHT ASSEMBLY



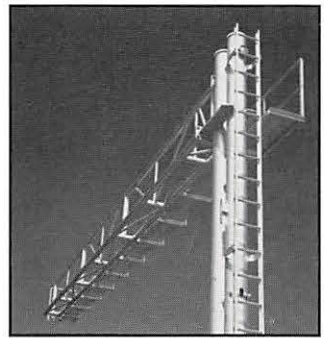
Union Switch & Signal's new HC-12OB 12-inch light unit is the heart of a new flashing light signal assembly that boasts a number of improvements in performance and maintenance ease.



The HC-120B's redesigned reflector and superior lens set a new industry standard for precision and light quality. The three-point mounting brackets enable the reflector to meet extremely close tolerances and to maintain them during installation and maintenance in the field. Three lenses are available with different deflection patterns to meet the varying needs of field applications.

An AAR terminal strip allows quick and simple disconnect, adding to the ease of maintenance. Flashing light assemblies are available in standard one-way and two-way configurations.

CANTILEVERS



Union Switch & Signal offers a full line of patented-design aluminum cantilevers for use in a variety of applications.

Cantilevers are available in lengths from 12 feet to 40 feet, in increments of two feet. The design Union Switch uses offers superior strength and stability with minimum weight. The cantilever arms can withstand winds of 100 mph, with gusts to 130 mph, and the end of the arm will support a 500-pound load with minimum deflection. A ladder and walkway permit easy access to signals, and the crossarm junction box faces the walkway for easy access. The walkway is 18 inches wide, and a three-foot high handrail and a non-skid surface provide the desired safety features for maintenance personnel. The walkway also is perforated to allow rain and snow to fall through readily, which reduces the accumulation of ice during inclement weather, and the ladder has an anti-climb guard to restrict unauthorized access.

US&S cantilevers are fabricated of 6061-T6 aluminum alloy, and all bolts and fastening hardware are stainless steel. Sign brackets are welded to the cantilever structure.

The structure arm and mast are prefabricated in the factory, which eliminates tedious assembly in the field. The structure arm to mast connection also is designed for ease of installation in the field.

A single upright mast is used to support cantilevers of up to 26 feet. Cantilevers from 28 to 40 feet require a double mast. Both single and double cantilever masts will mount on a four-bolt foundation.

Union Switch & Signal cantilevers meet or exceed AAR specifications for deflection and AASHTO specifications for allowable stresses.

ACCESSORIES

US&S also offers a full line of breakaway adapters, gate arm light sets, sliding light brackets, coil cord assemblies, shear pins, high-wind brackets, mast pole extensions, flex tips, aluminum sleeves and various grades of reflective tape.

ORDERING INFORMATION

For more information contact your field sales representative or call us today at 1-800-652-7276.